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## Parking Management

A report to the Honolulu City Council  
Pursuant to Resolution 16-196  
Requesting evaluation of other jurisdictions' parking  
management best practices that address shortage  
of on-street parking in high-demand areas.

Transportation Planning Division  
Department of Transportation Services  
City and County of Honolulu  
June 2017

### BEST PRACTICES

## The Problem

- On-street parking can be a scarce and coveted commodity. It allows people to park close to their destinations. People park on-street versus parking in garages because of proximity and visibility.
- Low turnover of these spaces induces "cruising" for an empty spot, which increases traffic congestion. It also frustrates would-be shoppers and hinders commerce.
- Conflicts in residential neighborhoods arise when "spillover parking" by commuters who work or live nearby occupy spaces which would be available to residents.



BeachWalk, Waikiki, where on-street stalls are priced at \$15.00/hr, Mon-Sat, 7AM to 6PM (changed by Bill 12(2017)); while the adjacent private off-street lot is priced at \$6.00/hr anytime. Obviously, on-street parking is hard to come by.

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## Two Dimensions

Two distinct dimensions to the problem:

- On-street and off-street parking issues are inter-dependent.
- Conflicts between residents and non-residents parking in residential neighborhoods and concerns are related to livability issues.



Dole Street, University Area where student parking is frantic even with tuition-paid bus passes, and excellent bicycle and walking options.

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## Parking Regulations

On-street parking regulations and enforcement are controlled by:

- Hawaii Revised Statutes, Title 17, Motor and Other Vehicles, 291C, Statewide Traffic Code.
- Revised Ordinances of Honolulu, Chapter 15, Traffic Code and Traffic Schedules.
- Meter enforcement officers wrote about 40,000 tickets last year.



1976  
Common excuses reported:  
"My meter just expired."  
"I was just here for a minute."  
"I didn't have change."  
"You were waiting here for my meter to run out."  
"Get a real job!"

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## Existing Conditions

In June 2015, Walker Parking Consultants completed the Honolulu Urban Core Parking Master Plan for the City. Among its findings:

- 77% of on-street metered parking spaces were occupied in Downtown/Chinatown, Kakaako, Mauka, Ala Moana and Makiki.
- 100% of on-street metered parking spaces were occupied in the Waikiki Core District.

**INVENTORY**

**Downtown Core Only**

1,800	City Off-street spaces
400	City On-street spaces

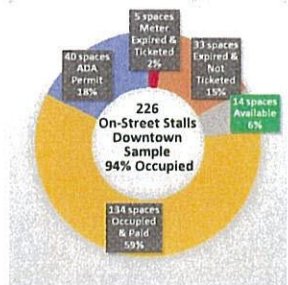
**Waikiki Core Only**

275	City Off-street spaces
260	City On-street spaces

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## How We Use On-Street Parking

In July 2011, DTS observed, at noon, the status of 226 on-street parking spaces in Downtown Honolulu. This provided a snapshot of how this resource was being used.



Category	Count	Percentage
134 spaces Occupied & Paid	134	59%
40 spaces ADA Permit	40	18%
5 spaces Meter Expired & Ticketed	5	2%
33 spaces Expired & Not Ticketed	33	15%
14 spaces Available	14	6%
<b>Total On-Street Stalls</b>	<b>226</b>	<b>94% Occupied</b>

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## Choosing Travel Mode

- The availability of free or inexpensive parking is a key factor most people choose to drive over alternatives such as riding the bus, bicycling, carpooling or walking.
- In retail and commercial districts, valuable on-street parking spaces, closest to destinations, are often monopolized by long-term parkers or employees at the expense of short-term customers.

**EXAMPLES:**

- City employees park in unassigned stalls in the Fast Municipal Building parking lot for \$40/month (the cost of a monthly bus pass).
- Employees get carpool discounts of 25% for two-occupant vehicles, 50% for three people and 100% for four or more people. However, there are only 22 carpool permits, or 2.5%.
- Pricing may be too low to entice people to shift to other modes.

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## The 85% Rule

- Traffic engineers generally recommend that 1 in 7 on-street parking spaces be vacant at all times as a benchmark of acceptable parking availability. This is also referred to as an optimal parking occupancy rate of 85 percent.
- It is achieved by setting on-street parking rates high enough (complemented by less expensive off-street parking) to encourage turnover of such spaces. Through monitoring and adjustments, the City can find the "just right" price.

**UNDERPRICED CURB PARKING**

All curb spaces taken. Cruising for parking.

**RIGHT-PRICED CURB PARKING**

At least one space available per block. No cruising.

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## Parking Management Toolbox

The following slides illustrate the most prevalent measures that cities are using to manage their supply of, and demand for, on-street parking.



- > Rate Increases
- > Paid Parking
- > Permitted Exceptions
- > Time Restrictions
- > Free Parking
- > Policies

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## Pricing is Key

- Pricing is often cited as the most important factor in influencing parking behavior. It sends a market signal on the true value of a parking space.
- Proper pricing can ensure the most convenient parking is available to those who value it most. On-street parking is best utilized by multiple shoppers instead of one worker who parks all day.
- Pricing represents the most viable and sustainable approach to managing demand when it exceeds capacity.

**EXAMPLES:**

- ✓ In Waikiki, it costs \$3 (subject to Bill 12) to park for 2 hours at a city metered on-street stall. Meanwhile, a driver will pay average \$8.50 to park for 2 hours in a Waikiki parking garage.
- ✓ This imbalance is the inverse of the pricing structure promoted by experts, who favor higher on-street fees to encourage turnovers and availability, and lower off-street fees for long-term parking.

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## Dynamic Pricing

- Variable Market Rate On-Street Pricing sets parking rates that fluctuate with demand to optimize parking availability for short-term users and minimize wasteful "cruising" for parking.
- Officials monitor parking demand, increasing meter rates where demand is high and lowering them where demand is low.
- Adequate funding is needed to maintain data collection and analysis. The advent of networked cellular parking meters makes this strategy viable.

**Before Sfpark**

Block A - CBD Location    No Spaces

Block B - Nearby Location    3 Open Spaces

**After Sfpark Dynamic Pricing Rates**

Block A - CBD Location    1 Open Space

Block B - Nearby Location    2 Open Spaces

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## Progressive Pricing

- The concept of progressive parking rates is analogous to that of progressive income tax rates. Drivers pay progressively higher fees the longer their car is parked.
- This encourages most people to use such spaces for short durations, but allows those who value the convenience or proximity of such spaces to stay longer, at an escalating price.

**EXAMPLES:**

- ✓ New York City charges \$2 for the first hour, \$3 for the second hour, \$4 for the third hour.
- ✓ Albany, NY, charges \$1.25 for the first two hours, then rates rise by 25 cents/hour thereafter.
- ✓ Aspen, CO, charges \$2 for first two hours, \$3 for third hour, \$4 for fourth hour.

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## Availability Trumps Price


- ✓ For the driver who needs a parking space, parking availability is more important than price.
- ✓ No space means no choice.
- ✓ Proper pricing lets the commuter choose where to park.



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## Time Limits

- Regulates length of stay to ensure turnover. For example, a city may allow 15 minutes in a loading zone, 30-minute curbside parking in front of a shop, 1-2 hours in a business district.
- By Traffic Code, vehicles parked on-street must be moved at least 50 ft. once in 24 hours.
- If meter rates are set to achieve a vacancy of 15%, time limits may be unnecessary.



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## Restricted Parking Zones

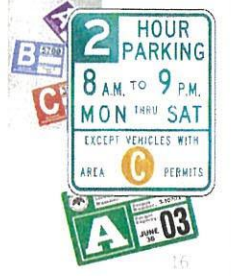
In these zones, preferential parking is given to those vehicles displaying a valid permit or plate or actively performing a specific purpose. Reserve parking for ADA, police, taxis, electric vehicles, passenger loading, freight loading and residential permit parking fall within this category. This presentation will focus mainly on residential permit parking.




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## Residential Permit Parking (RPZ)\*

- Some like RPZ because it gives residents significant possession of on-street stalls. Others hate because it might push issues to another block or is a hassle or may cost money.
- RPZs are often created where "spillover" commuter parking from a nearby university, hospital, retail, or other generator crowds out residents from their on-street parking.
- RPZs may not be suitable for neighborhoods near public amenities, such as parks and beach access.





**BEST PRACTICES**

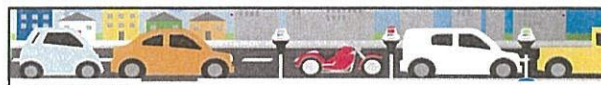
## How RPZ Works

- Most RPZs favor residents for on-street parking but allow "outsiders" to park, with restrictions.
- In a typical district, residents with RPS decals are exempt from the curbside parking time limits.
- Other RPZ districts prohibit non-resident parking altogether during designated hours.
- A RPZ permit does not guarantee an on-street parking spot, and in many districts the number of permits exceeds the number of parking spaces.

**EXAMPLES:**

- Washington, DC: Permit holders exempt from 2-hour parking limit, weekdays between 7 am and 8:30 pm.
- San Luis Obispo, CA: Only permit holders may park during designated hours.
- Philadelphia: Permit holders exempt from time limits and meter fees.
- Boston: Only vehicles registered in the neighborhood may park there.
- San Francisco: Permit holders exempt from parking time limits.

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## Establishing RPZ

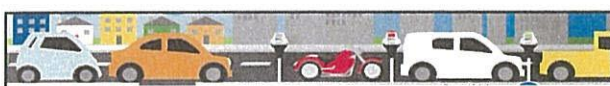
In creating a RPZ, municipalities typically require that several thresholds be met:

- A certain percentage say 60% of on-street parking is occupied by non-residents, resulting in a parking problem to be addressed.
- A sufficiently large area is proposed for a RPZ. If the district is too small, the problem just migrates to the next block.
- A significant portion of residents or property owners must sign a petition requesting a RPZ.

**EXAMPLES:**

- San Francisco: 250 households must sign petition. Blocks must be contiguous and have 1 mile of street frontage. Parking occupancy at least 80%, with half of those by non-residents.
- Seattle: Minimum 10 contiguous blocks or 20 block faces. 35% of parking by non-residents.
- Pittsburgh: 75% of households must sign petition.
- Washington, DC: 51% of households sign petition.

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## RPZ Fees

- Most municipalities charge a fee for a RPZ permit. Some have an escalating fee scale for multiple permits.
- Some do not charge a fee.
- Some limit the number of permits per household.
- Short-term day/visitor permits are available at a cost in most RPZ zones.

**EXAMPLES:**

- San Francisco: \$127/year, limit four per address. Day permits \$5-\$10.
- Seattle: \$65 for two years.
- Bellevue, WA: No fee, no limit on how many.
- Fort Collins, CO: First vehicle free, \$15-\$40-\$100-\$200 for subsequent vehicles.
- Boston: No fee.
- Columbus, OH: \$24/year, limit two resident stickers and one visitor hangtag.
- Ottawa, Canada: \$648/year.

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## Employer Strategies

Employers can reduce demand for parking via:

- Transit, vanpool or carpool subsidies offer workers free or discounted transit passes, and preferred parking for vanpool and carpool users.
- Parking Cash-Out gives workers the option of taking cash in lieu of employer-provided parking.
- Amenities for those who bike or walk to work include secure bicycle parking and shower/locker facilities.
- Flexible work hours and conditions allow workers to switch to a 10-hour/four-day workweek, or work from home.



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## Land Use Strategies

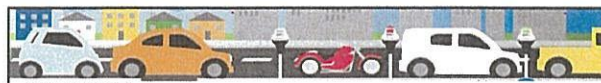
Cities can manage parking supply and demand by:

- Eliminating requirements that buildings provide a designated minimum number of parking spaces, and letting developers decide. Some cities even impose parking maximums.
- Unbundling parking from condo sales and office leases, to show the true cost of parking relative to alternatives such as public transit.
- Requiring or incentivizing amenities that promote alternate modes, such as bicycle storage and car-sharing parking spaces.

**EXAMPLES:**

- San Francisco: Requires unbundling of parking for new rental and for-sale housing of 10 or more units.
- San Diego: Up to 25% of parking must be unassigned and eligible for shared parking.
- New York City: Parking maximums of 0.2-0.35 per unit for high-density areas.
- Portland, OR: 1 carshare space allowed in lieu of 2 general parking spaces.

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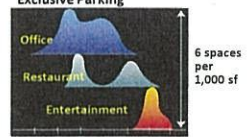


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## Developer Strategies

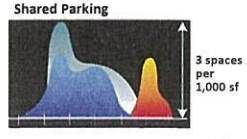
Promote shared parking for mix-use developments that require parking at different times of the day. Like an office building in the same development with a movie theater. Parking demand for office workers will be from 8 to 5 weekdays. While, moviegoers will be looking for parking in the evening and on the weekends.

**Exclusive Parking**



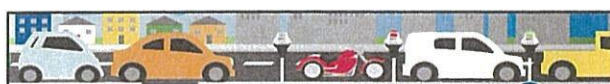
6 spaces per 1,000 sf

**Shared Parking**



3 spaces per 1,000 sf

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## Parking Benefit Districts


Cities can build community support for establishing or increasing on-street parking fees by returning some of the revenue to the affected neighborhoods. Parking benefit districts administer the money, which can be put to work cleaning sidewalks, installing new lighting or street furniture, or enhancing police patrols.

Parking benefit districts are often created where there are no existing meters. Revenues would be new, and not diverted from existing uses.

**EXAMPLES:**

- Pasadena, CA, revitalized its Old Pasadena historic downtown in part by converting free on-street spaces to metered parking. This provided money for neighborhood improvements and freed up parking for shoppers.
- San Diego's Old Town already had parking meters when rates were raised. As a compromise, the city gave half of the meter revenues to the affected neighborhoods.

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## On-Street Payment Methods

Cities have growing options for accepting payment for on-street parking:

- Single-space meter, coins only
- Single-space smart meter (shown at right)
- Multi-space meter (Pay-by-space, pay-and-display, pay-by-plate)
- In-car meter
- Permits and decals (though not direct payments, are legal warrants to park)
- Pay via cell phone, which can replace parking meters entirely.

**EXAMPLE:**

Industry standards indicate that by allowing payments with credit cards, meter revenues increased by at least 25%. Honolulu's IPS smart parking meters raised revenues slightly higher than 25%.



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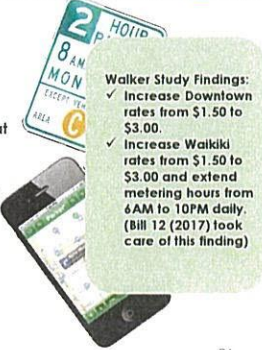
## Recommendations

This report examined successful parking management strategies by other cities. For Honolulu, the first actions are:

- Set on-street parking fees at levels that encourage turnover and maintain a 15% vacancy rate.
- Use wayfinding to direct cars to open on-street and off-street spaces.
- Evaluate residential permit parking zones where appropriate to address conflicts between residents and outsiders.

**Walker Study Findings:**


- ✓ Increase Downtown rates from \$1.50 to \$3.00.
- ✓ Increase Waikiki rates from \$1.50 to \$3.00 and extend metering hours from 6AM to 10PM daily. (Bill 12 (2017) took care of this finding)



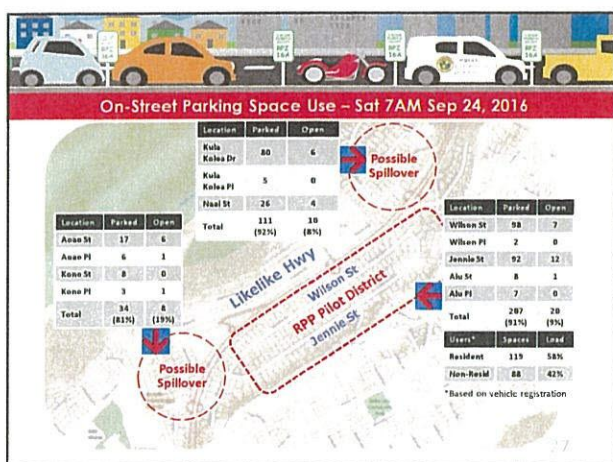
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## Kalihi Valley Residential Parking Zone (RPZ) Pilot Report

- Located off Likelike Highway, neighborhood has only two-ways in through Alu and Wilson Streets.
- Included about 198 TMK household addresses.
- Involved 230 unmarked on-street stalls.
- Situated across from public housing with limited parking.




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## Parking issues to address

- On-street parking unavailable for residents and guests after evening.
- More than 91% of the unmarked stalls taken after evening hours.
- 60% of the stalls taken by residents and 40% by non-residents.
- Nearby public housing complex imposing parking and other related burdens on community.



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## Other issues imposed by outsiders

- Trashing and littering along sidewalks and in streets.
- Sleeping in parked cars.
- Loitering and allegedly causing disturbances and crimes at night.
- Abandoning derelict vehicles in the neighborhood.
- Including parking woes, these issues lead to the city's first RPZ pilot.




Homeowners' dreadful mania is a ticket-collecting clunker parked in front of your house.

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## RPZ Pilot to test effectiveness

- Launched April 1-30, 2017.
- Scheduled one-day neighborhood processing center before startup. Applications, also available on DTS/Parking website.
- Distributed 309 residential and 330 visitor permits free to 79% (152/193) neighborhood households.
- Budgeted \$3,500 for pilot, mostly to rent sign barricades for a month.

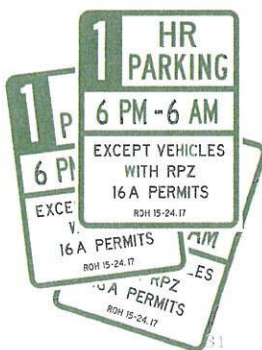


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## How it works

- One-hour street parking max nightly from 6PM to 6AM except vehicles with RPZ permits exempt.
- Max of 2 residential and 2 visitor permits per TMK household address and permits must be displayed when using on-street parking during RPZ hours.
- Fine is \$35 for violations and HPD issued about 20 tickets during the pilot.



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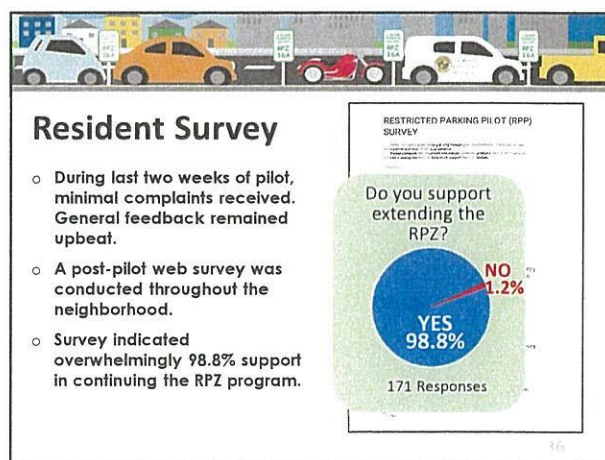
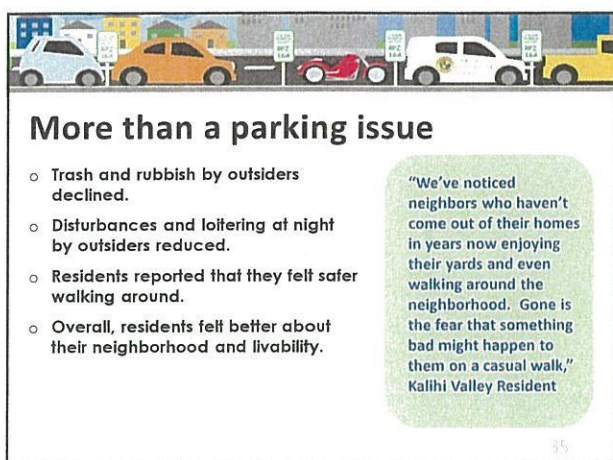
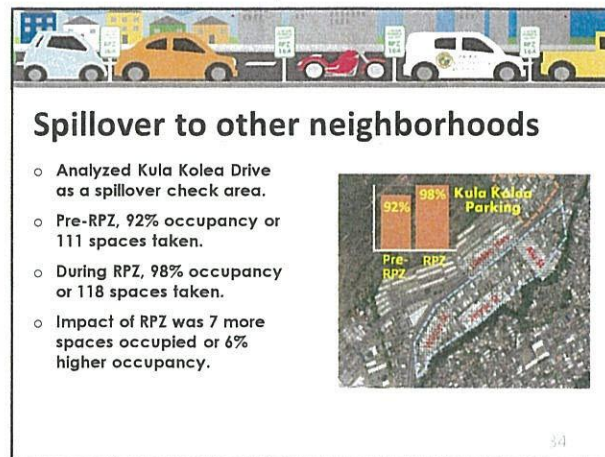
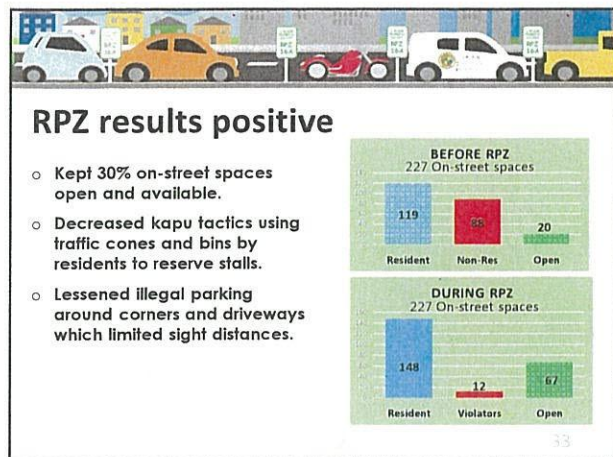


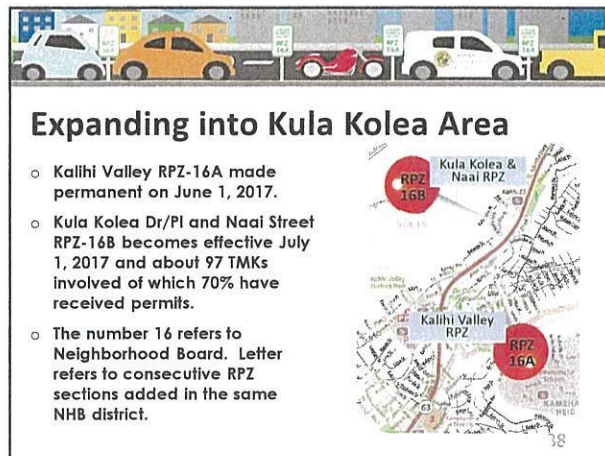
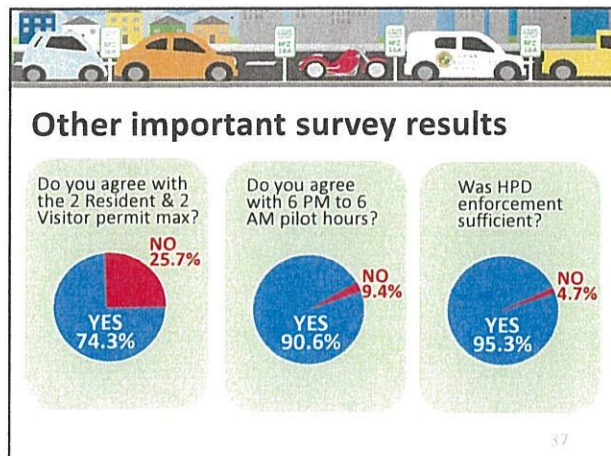
## Permit max biggest stickler

- Some residents claimed unaware of RPZ pilot and were quickly redirected to the DTS/RPZ website - recognizes the importance of having a project website.
- Multi-families in single households claimed max 4 permits insufficient resulting in ironing out each case.
- Family gatherings requiring more permits were resolved by making available one-day event permits.



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### DTS's Surface Parking Lots

NAME	STALLS	TYPE	RATE	TIME LIMIT
Palace Square Post Office	32	Metered	\$1.50/Hr	1 HR
Kaimuki Municipal Parking Lot #1	270	Operator	Varies	
Kaimuki Municipal Parking Lot #2	106	Metered	\$.75/Hr	2 HR
Kailua Elderly Parking Garage	140	Metered	\$.75/Hr	5 HR
Kailua Municipal Parking Lot	140	Metered	\$.75/Hr	5 HR
Kuhio Kaiolu Parking Lot	65	Metered	\$1.50/Hr	5 HR
Wahiawa Parking Lot	17	Marked	Free	1 HR
Salt Lake Parking Lot	152	Metered	\$.10-.50/Hr	2HR
<b>Total:</b>	<b>922</b>			




### DTS's Off-Street Parking Garages

NAME	STALLS	RATE	TIME LIMIT
Chinatown Gateway Garage	275	\$1.50/Half-Hr.	6AM-Midnight
Harbor Court Garage (Queen Street)	458	\$1.50/Half-Hr.	6AM-Midnight
Harbor Village Garage (River/Nimitz)	72	\$1.50/Hr.	24 HR
Hale Pauahi Garage (Beretania St)	197	\$1.50/Half-Hr.	6AM-Midnight
Kekaulike Courtyards Garage	52	\$1.50/Half-Hr.	6AM-Midnight
Kukui Plaza Garage	434	\$1.50/Half-Hr.	6AM-Midnight
Marin Tower Garage (Smith Street)	413	\$1.50/Half-Hr.	6AM-Midnight
Smith Beretania Garage (Beretania)	118	\$1.50/Half-Hr.	6AM-Midnight
<b>Total:</b>	<b>2,019</b>		



### Specialty Parking Programs

- **Bike-Sharing**
- **Car-Sharing**
  - 50 Reserved Car-Sharing Permits
  - 175 Free Floating Car-Sharing Permits
- **Electric Vehicles Parking**
  - Deployed in 2010
  - DTS in charge of three charging stations
  - DES in charge of two charging stations
  - DFM in charge of three charging stations
- **Disabled Parking Placards**
- **Street Usage Permits for Construction for Off-Street Meters**
- **City Employee parking in off-street parking facilities**

### Update the Honolulu Comprehensive Parking Study, 1973


- Performed an analysis of parking within the Urban Core.
- Reviewed the parking system, inventoried facilities, reviewed operations, assets, revenues, and responsibilities.
- Analyzed the existing parking pricing program.
- Reviewed occupancy, turnover, enforcement, and pricing.
- Assessed the maintenance needs of parking assets.



### Parking Study Recommendations

- Upgrade parking meter technology.
- Increase parking rates.
- Extend meter hours.
- Invest in existing infrastructure  
(50-year plan to maintain existing facilities).
- Conduct a parking operations audit.
- Create a single source responsibility center.
- Develop a marketing and public relations program.
- Promote parking (Branding, Ambassador Approach to Enforcement, Promotion of Parking Meter Program).
- Automate off-street collection of revenue.


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### Parking Study Recommendations


- Bundle operator parking agreements.
- Institute efficient curb management.
- Create a Parking Authority or Transportation Management Associations.
- Revisit potential for shared parking citations revenue.
- Provide parking wayfinding signage and parking guidance technology.
- Capture revenues from parking overstay.

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### First Action: Install Smart Meters

- Phase 1 -- 340 Duncan electronic single-spaced meters converted.
- Phase 2 -- 1,050 Duncan electronic single-spaced meters upgraded to IPS Model M5 Smart Meters adding a credit card slot with EMV Chip Card Fraud protection and additional customer options.
  - 340 Phase 1 meters retrofitted
  - 361 meters upgraded in Urban Core
  - 291 meters upgraded in Waikiki
  - 51 meters added in Waikiki
  - 7 meters missing and to be replaced
- Phase 2 Balance -- 1,000 more meters.



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### First Action: Install Smart Meters

- Customer usage: 30% credit card and 70% cash
- Credit card transactions: 23,000 - 26,000 per month
- Credit card monthly meter operating fee is approximately \$9.00 per meter/per month.
- Credit card merchant fees are \$1,500-1,900 per month
- Revenue estimate:
 

	Monthly	Yearly
• Coin transaction:	\$ 100,000	\$ 1,200,000
• Credit card transaction:	\$ 26,000	\$ 312,000
• Total revenue:	\$ 126,000	\$ 1,512,000


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### Next Action: Bill 12 (2017) CD2 Parking Meter Rate Increase

- Increases the parking meter rate for areas in the Downtown, Chinatown, Civic Center, and the urban core parking meter zones from the existing \$ 1.50 per hour rate to \$ 3.00; and,
- Increases the parking time limit from 6:00 AM to 10:00 PM and increases the parking meter rate for the parking meter zones in Waikiki to \$ 3.00 per hour; and,
- Increases the parking meter rate for all other parking meter zone areas not stated above from \$ 0.75 cents per hour rate to \$ 1.50 per hour.

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### QUESTIONS



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